WHAT IS CLAIMED IS:

1. A pseudotyped retrovirus virion comprising a Lymphocytic Choriomeningitis Virus (LCMV) strain WE-54 envelope glycoprotein.

2. The pseudotyped retrovirus virion of claim 1, wherein the envelope glycoprotein comprises a phenylalanine at residue 260.

3. The pseudotyped retrovirus virion of claim 1, wherein the envelope glycoprotein comprises a phenylalanine at residue 153.

4. The pseudotyped retrovirus virion of claim 1, wherein the envelope glycoprotein comprises a phenylalanine at residue 260 and a phenylalanine at residue 153.

5. A pseudotyped feline immunodeficiency virus (FIV) virion comprising a envelope glycoprotein from Lymphocytic Choriomeningitis Virus (LCMV).

6. The pseudotyped FIV virion of claim 5, wherein the LCMV is strain WE-54.

7. The pseudotyped FIV virion of claim 6, wherein the envelope glycoprotein comprises a phenylalanine at residue 260.

8. The pseudotyped FIV virion of claim 6, wherein the envelope glycoprotein comprises a phenylalanine at residue 153.

9. The pseudotyped FIV virion of claim 6, wherein the envelope glycoprotein comprises a phenylalanine at residue 260 and a phenylalanine at residue 153.

10. An isolated vector comprising a nucleic acid encoding an envelope glycoprotein from Lymphocytic Choriomeningitis Virus (LCMV) strain WE-54.

11. The vector of claim 10, wherein the envelope glycoprotein comprises a phenylalanine at residue 260.

12. The vector of claim 10, wherein the envelope glycoprotein comprises a phenylalanine at residue 153.

13. The vector of claim 10, wherein the envelope glycoprotein comprises a phenylalanine at residue 260 and a phenylalanine at residue153.

14. A method of producing in the form of infectious particles a transgene vector containing a remedial gene, comprising transfecting a cell with
(a) a packaging vector;
(b) a vector according to any of claims 10-13, and
(c) a transgene vector comprising the remedial gene and a functional packaging signal, which by itself is incapable of causing a cell to produce transducing vector particles,
wherein the cell produces infectious transducing vector particles comprising the transgene vector in RNA form, a Gag protein, a Pol protein, and a pseudotyped envelope glycoprotein.

15. A method of delivering a remedial gene to a target cell *in vivo*, comprising producing viral particles by the method of claim 16 and then infecting the target cell with an effective amount of infectious transducing transgene vector particles.

16. The method of claim 15, wherein the target cell is an airway epithelia cell, a central nervous system cell, or a hepatocyte cell.

17. A method comprising inserting an LCMV envelope glycoprotein into a lipid vesicle, and electroporating plasmid DNA into the lipid vesicle.

18. A packaging cell line comprising an inducible expression nucleic acid sequence comprising a polynucleotide encoding an LCMV-WE54 envelope glycoprotein.

19. The packaging cell of claim 18, wherein the envelope glycoprotein comprises a phenylalanine at residue 260.

20. The packaging cell of claim 18 wherein the envelope glycoprotein comprises a phenylalanine at residue 153.

21. The packaging cell of claim 18, wherein the envelope glycoprotein comprises a phenylalanine at residue 260 and a phenylalanine at residue 153.

22. The packaging cell of claim 18, further comprising a transgene vector.

23. The packaging cell of claim 18, wherein the transgene vector comprises a remedial gene.

24. A method of producing in the form of infectious particles a transgene vector containing a remedial gene, comprising transfecting a packaging cell of claim 18 with

(a) a packaging vector, and

(b) a transgene vector comprising the remedial gene and a functional packaging signal, which by itself is incapable of causing a cell to produce transducing vector particles,

wherein the cell produces infectious transducing vector particles comprising the transgene vector in RNA form, a Gag protein, a Pol protein, and a pseudotyped envelope glycoprotein.

25. A kit comprising a vector according to any of claims 10-13, and a transgene vector comprising a functional and compatible packaging signal, the transgene vector being incapable by itself of causing a cell transfected by the transgene vector to encapsulate the RNA form of the transgene vector into a retroviral particle comprising an LCMV-WE54 envelope glycoprotein.

26. The kit of claim 25, wherein the LCMV-WE54 envelope glycoprotein comprises a phenylalanine at residue 260 or a phenylalanine at residue 153, or a phenylalanine at both residue 260 and residue 153.

27. A method of treating an airway epithelial cell, wherein the airway epithelial cell has an apical surface and a basolateral surface, comprising administering to the apical surface of the airway epithelial cell a Lymphocytic Choriomeningitis Virus (LCMV) strain WE-54 pseudotyped vector.

28. The method of claim 27, wherein the airway epithelial cell is a human airway epithelial cell.